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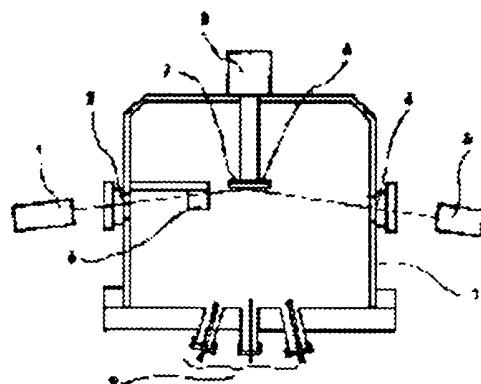
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(54) X-RAY ANALYZER AND SEMICONDUCTOR MANUFACTURING DEVICE USING THE SAME

(57)Abstract:

PURPOSE: To monitor the film deposition process in the local region on a substrate surface within MOCVD(Metal Organic Chemical Vapor Deposition) or ALE(Atomic Layer Epitaxy) wherein a film is to be deposited at the pressure exceeding 10-3Torr using a gas source material.

CONSTITUTION: Within a MOCVD device, a substrate 6 surface is irradiated with the X-rays emitted from a beam source 1 using focussing mirror 3 at an oblique incident angle close to critical total reflection angle. At this time, the X-ray signals transmitted from the substrate 6 surface are detected using an X-ray detector 5. Accordingly, the state of a deposited film on the substrate 6 surface can be monitored by a high lateral resolving power even at the pressure exceeding 10-3Torr thereby enabling the pertinent deposition process requirements to be decided meeting the deposition requirements.



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